

Since microdisplay systems, especially the liquid crystal on silicon (LCOS) Microdisplay frequently operate in the hot interior of a projection device, the microdisplay technology is still challenged by the need to effectively control and compensate the performance variations caused by temperature increases such that the quality of display would not be impaired by uncontrolled high temperatures. There are several prior art approaches taken to solve this well-known problem. A first one was reported by Kurogane *et al* "**Reflective AMLCD for Projection Displays**" (D-LIA, Paper 5.3, Proceedings SID 1998) is the use of an electro-optic mode that does not exhibit noticeable thermal variation in the linear region of interest. However, the availability of the materials employed and special manufacture processes and mode of operations would significantly restrict the usefulness of the proposed microdisplay systems. Another is the approach taken in US Patent RE 37,056, Wortel, *et al*, "**Temperature Compensated Color LCD Projector**" (February 20, 2001), where the inventors disclose a method to manufacture the cell in such a manner that the slopes of the electro-optic curves measured at different temperatures in the same liquid crystal device are quite close. A simple temperature measurement system is employed to provide information to a system that can adjust the column drive voltage and thus effect the compensation. However, this particular approach is of limited usefulness because the method requires a very specific approach to the design and manufacture of the cell.

- b) Please amend the paragraph starting from lines 7 to 25 on page 6 as set forth below:

Referring to Fig. 2 for the basic interfaces between the microdisplay controller 100 and the microdisplay device 200. The signals of temperature measurements are provided to the controller 100 from the temperature sensor shown as TS1 105 and TS2 110. In another co-pending Patent Application 10/627,230 submitted by ~~a co-inventor~~ **the Applicant** of this Application, the details of the temperature measurement system are described. The Patent Application 10/627,230 is hereby incorporated as reference in this Application. In a preferred embodiment of the temperature sensing system as disclosed in the co-pending Application includes two diodes of two unequal current drains as shown as TS1 and TS2. The currents passed from the current source 115 through the two temperature sensing diodes TS1 105 and TS2 110 are applied to a voltage

controlled oscillator VCO 120 via a VCO source selecting device 125 to generate an output signal as frequency that dependent on the temperature measurements. The temperature sensors are integrated into a backplane of a microdisplay system such that the sensors are disposed immediately next to the liquid crystal material where the temperature measurements and control are most crucial by controlling the temperature for improving the quality of image display.